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GB 0324237  
GB 0239396  
US 3675264

US 2167129  
US 2092987

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A4K

## (54) Fingerstall toothbrush

(57) A fingerstall-style toothbrush made of rubber, plastics or other materials of equivalent efficacy has integrated projected formation; and is characterized by its including the base of the finger sheath that can be put on the forefinger and the mane extending and protruding outward from the circumference of the whole base and having considerable softness so that when put in the mouth it can not only brush the teeth but also cause no harm to the inner wall of the oral cavity or to the gums, completely eliminating any dead angle in the oral cavity through the agile operation and turning of the forefinger joint to achieve the goal and effect of ensuring cleanliness and health.

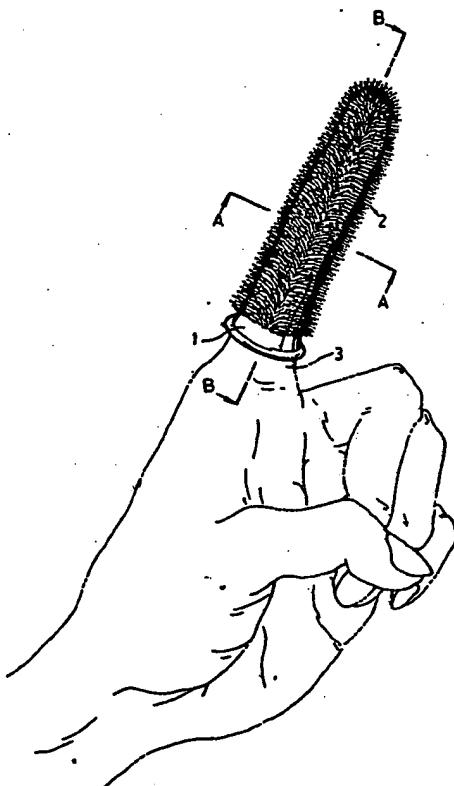


FIG.-1

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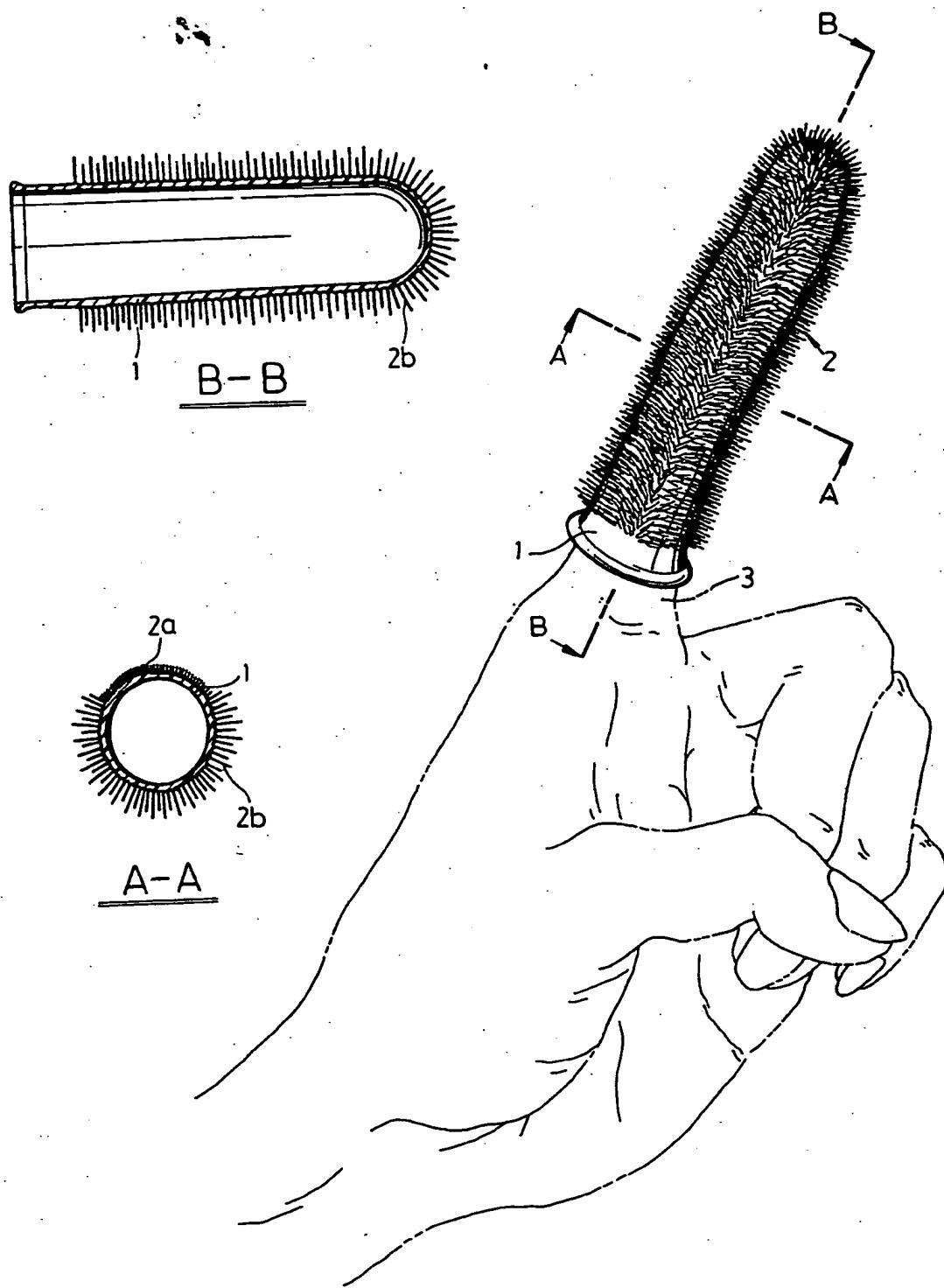


FIG.-1

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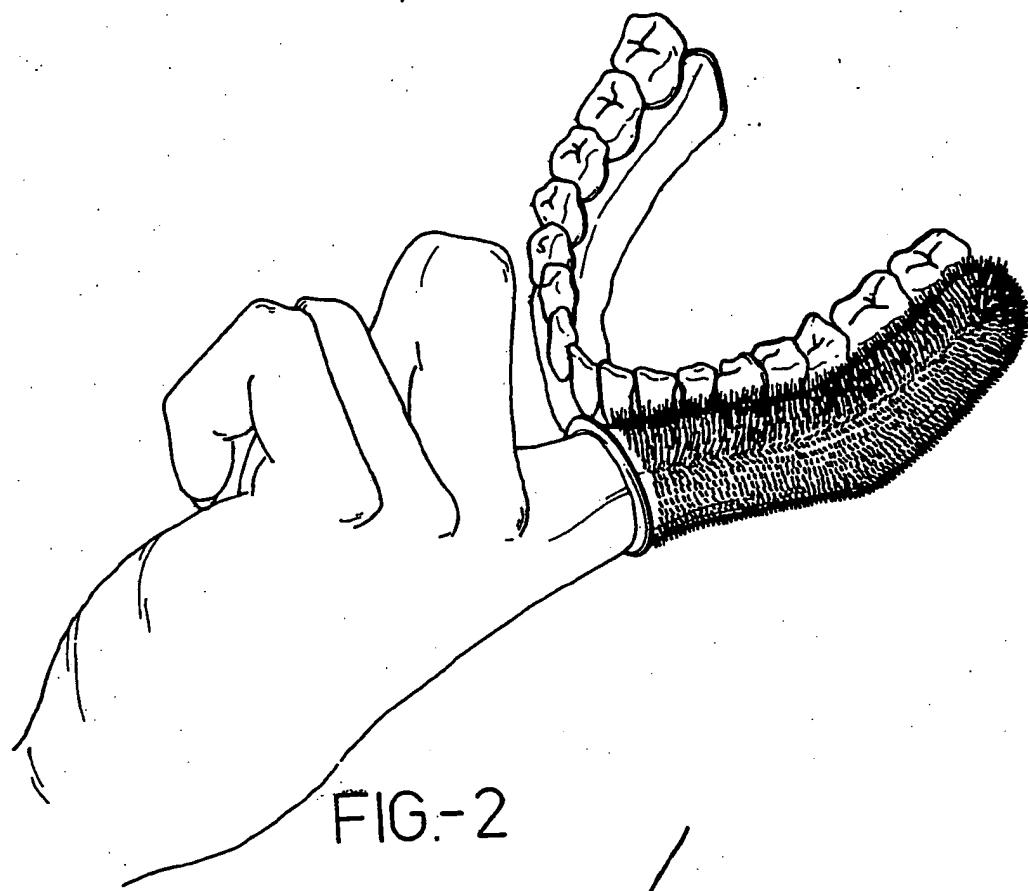


FIG.-2

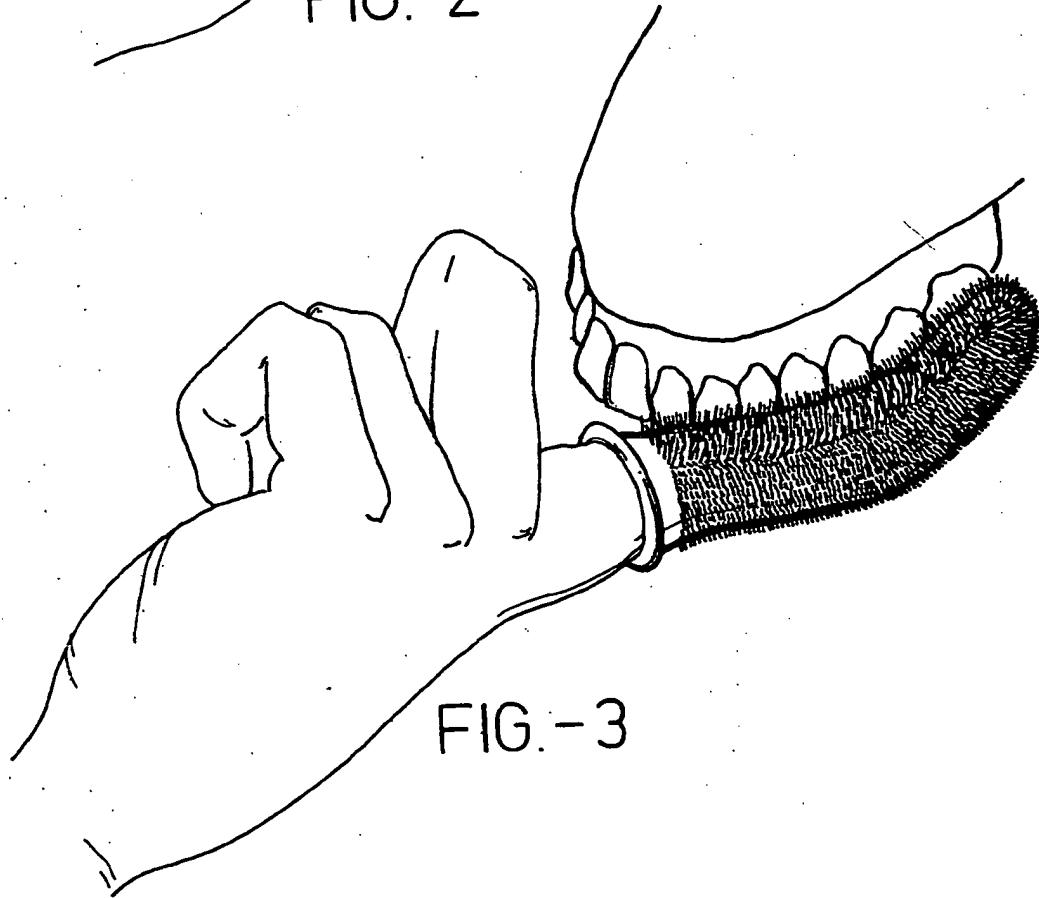


FIG.-3

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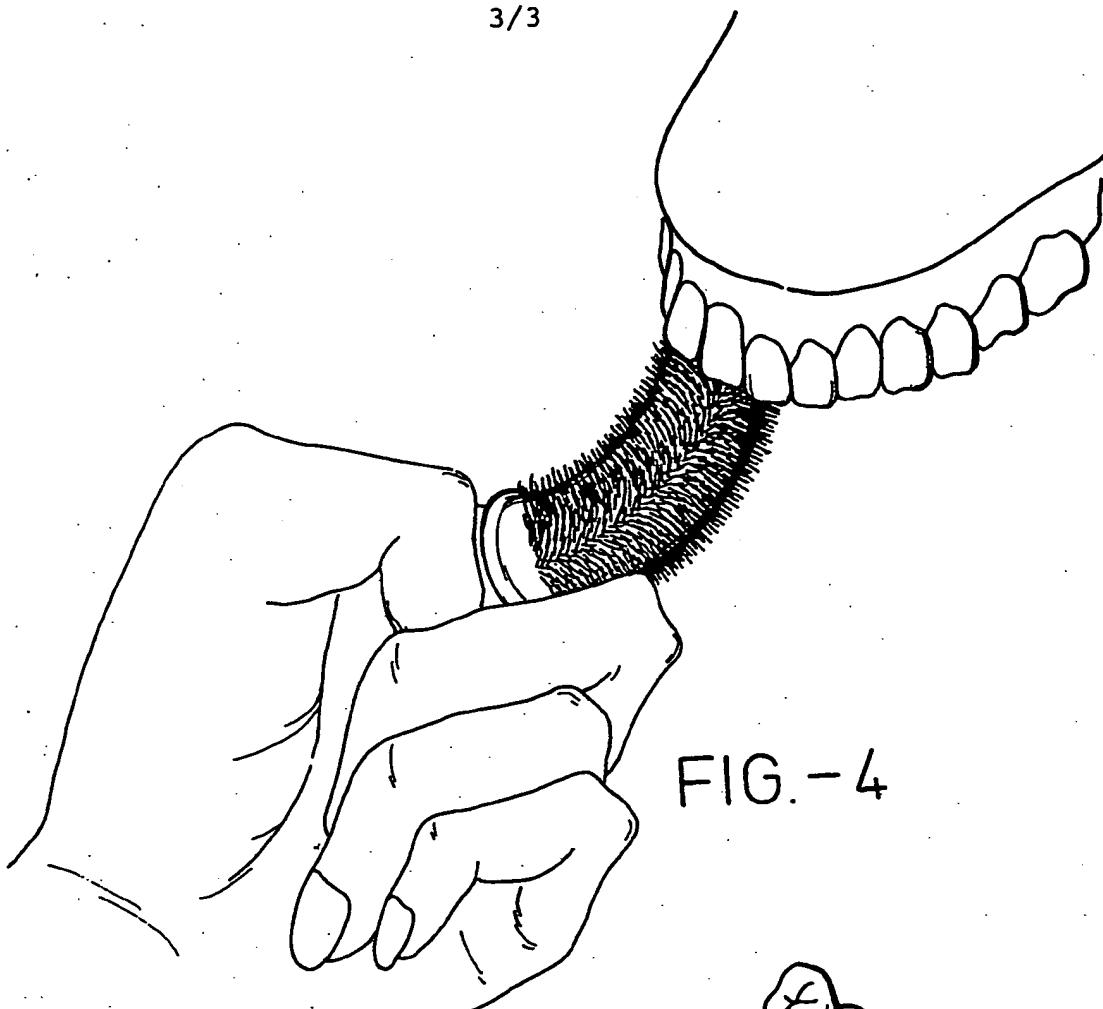


FIG.-4

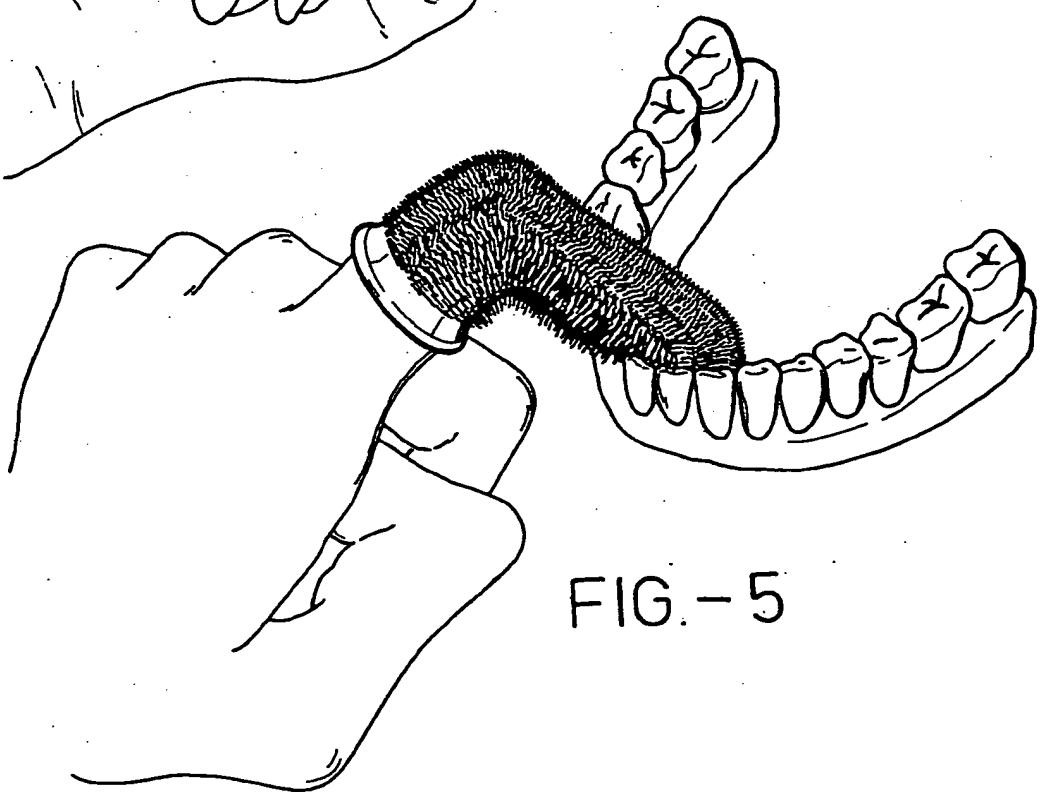


FIG.-5

**SPECIFICATION****A fingerstall-style oral cleansing device**

5 This present invention provides a new toothbrush design, particularly a "fingerstall-style oral cleaning device."

It is a well-known fundamental idea that if the teeth can be constantly kept clean, tooth cavities 10 are not apt to arise. But if there is no proper brushing to protect the teeth, then the interaction between the germs of the mouth and the food particles stuck on the tooth surface and between the teeth may cause tooth decay. And harmful 15 deposit will form on the teeth. The gums will also be apt to be excited by the deposit to turn red and bleed. This is the so-called gingivitis, which if long untreated will cause harm to the supporting structure of the teeth and lead to the gums' gradually 20 fall off. This is the periodontal disease that makes everyone's face change clear at the mention of it.

As shown in the above, most of the dental diseases are derived from the fact that long time failure to keep the teeth and oral cavity clean gives 25 rise to germs. Therefore, daily maintenance of the teeth is a good measure that strikes at the root of diseases. And growing a right and proper habit of brushing teeth will be the most fundamental, as well as the most immediate and effective, method 30 to carry out the goal.

And one of the often accepted and used methods of brushing teeth is to brush in the direction of growth of the teeth, that is to brush the upper teeth downward, and vice versa.... to brush the inner surface of the teeth and the surface of the tongue with similar action, and to brush the occlusion surface of the teeth with a frictional kind of action... But may we ask how many people now adopt the so-called right method of brushing teeth 40 As shown by the long time observation and questionnaire research by the inventor, the reason why ordinary people fail to keep their mouth clean lies partly in the inconvenience and limitations in use of the toothbrush itself. For example:

45 1. A toothbrush is a long plastic handle with many tufts of mane fixed on its head. On the whole, it is an indisputable fact that owing to the highly hard material of the handle and the single direction of the mane, a toothbrush cannot brush 50 any aspect of the teeth. Above all, as regards brushing work for wisdom teeth or molars at the ends of the tooth-ridges, it cannot meet the requirements.

2. The design of the mane is aimed at the brushing of the teeth, and its hardness geared to the teeth. But in the process of brushing, we often brush the gums and tongue, as well as the parts of the inner wall of the oral cavity where capillaries are most minutely spread and the epidermis is 60 rather soft. Therefore, it is a frequent occurrence that the gums break and bleed in brushing teeth.

Therefore, owing to the above-mentioned facts, the present invention, as a result of hard thinking and search and painstaking research, has finally 65 developed a finger-stall-style toothbrush wholly.

different from the traditional kind.

That is, the main purpose of the invention is to provide a "fingerstall-style oral cleansing device" which because of small volume and great plasticity 70 may be carried around and does not take up much space, and on which may be added fragrant, anti-septic, oral preparation or desiccant condensed toothpaste, usable with water and disposable after use, convenient and meeting the requirements of hygiene.

Another purpose of the invention is to provide a "fingerstall-style oral cleansing device", using in the 120-degree sectorial area on the back side of the forefinger, shorter mane of smaller sectional scope and making its softness better so that at the same time the front side of the forefinger is brushing teeth, the softer mane of the back side can perform the functions of cleansing and massage on the gums and inner wall of the oral cavity on the major principle of not hurting them.

Still another purpose of the invention is to provide a "fingerstall-style oral cleansing device", produced by integrated projected formation, low-cost and low-price—an easy-to-carry and use consumable for the masses.

*Figure 1: An elevation showing the appearance of the invention, the fingerstall-style oral cleansing device. Detail drawing A-A: Gross-section of the invention. Detail drawing B-B: Vertical section of the invention.*

*Figures 2-5: Embodiment drawings of the invention.*

As shown in Figure 1, the invention is made of plastics or such similar materials as rubber by means of integrated projected formation; on the circumference of the base (1) of the finger sheath are spread many manes, of which are arranged in the sectorial area equivalent to 120 degrees on the back side of the forefinger (as shown in detailed drawing A-A) use shorter and finer mane of greater density (2a), so that the mane (2a) on the back of the forefinger (3) has better softness to avoid causing frictional injury to the inner wall of the oral cavity when brushing the teeth; whereas 100

105 within the area of the other 240 degrees are spread manes of two different heights (2b) (as shown in detailed drawing B-B), whose hardness are greater than that of the mane (2a) on the back of the forefinger (3), and when brushing the teeth the two-height method of arrangement can increase the cleansing effect. And as for the mane (2b) facing the teeth, it would be best for us to adopt that with its diameter ranging from 0.18m/m, whose softness is most suitable for the general public; but if

110 the mane (2b) is regarded as too soft to clean away the deposit of the teeth, we still can, when brushing teeth, apply pressure to the forefinger (3) to use the pressure on the forefinger (3) for assisting the mane (2b) felt to be too soft.

115 120 The purpose of using the forefinger in brushing the teeth is that the two joints on the forefinger can be bent at will to touch any dead angle in the mouth; moreover touch by the forefinger has an agility more precise than a toothbrush and is more convenient too. Furthermore unlike a toothbrush

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which is hard to turn, the forefinger can be turned at will. For this reason, the replacement of the old toothbrush with the fingerstall-style method has its revolutionary breakthrough value.

5 On the mane (2) of the invention may be added desiccated condensed toothpaste and fragrant material for getting rid of foul breath at one stroke. Figures 2-5 are the embodiment drawings of the invention when used in brushing the teeth. As 10 shown in the drawings, by means of the invention, any dead angle in the mouth can be reached to achieve a complete cleansing effect.

To sum up the above-mentioned, the merits of the invention can be inducted as follows:

- 15 1. Good effect in use: By means of the turning of the forefinger, any dead angle in the mouth can be completely eliminated to achieve the purpose of thorough cleansing.
- 20 2. Easy to carry around and usable where water is available, capable of achieving the double effect of removing foul breath and cleansing the mouth.
- 25 3. Safe to use: As the design of the mane is wholly geared to the inner wall of the oral cavity and the teeth, when it is used, its softness will cause injury to the epidermis of the oral cavity and make it bleed.
- 30 4. Low cost: The invention can mass-produced by means of integrated projected formation with low cost, suitable for the general consumers.
- 35 Thus, the inventor is sure to achieve a complete effect of cleansing the mouth, and can remove the difficulties of the traditional kind of toothbrush in eliminating dead angles in the mouth, as well as in meeting the needs of travel—no doubt, a very practical invention.

#### CLAIMS

1. A kind of "fingerstall-style oral cleansing device", made of plastics, rubber or other materials of equivalent efficacy by means of integrated projected formation, is characterized by its including the base of the finger sheath and the mane that extends and protrudes outward from the circumference of the base; and the elastic fingerstall-style oral cleansing device, with its base slipped on the circumference of the whole forefinger, enables the mane on the base to produce the effect of brushing and massaging the teeth, gums and inner wall 50 of the oral cavity through the bending operation of the finger joints.
2. The fingerstall-style oral cleansing device as stated in the first item of the claims if characterized by having a sectorial area forming within a suitable 55 degree on the back of the forefinger; compared with the part other than the sectorial area, the section has mane or smaller diameter, lower height and greater density so that in brushing the teeth the mane within the sectorial area can cleanse and 60 massage the inner wall of the oral cavity at the same time.

3. A fingerstall-style oral cleansing device substantially as hereinbefore described with reference to the accompanying drawings.

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